

ANALYTICAL REPORT

Job Number: 680-78798-1

Job Description: Pavillion Groundater

For:

US EPA National Risk Mngmnt Research
919 Kerr Research Drive
Ada, OK 74820

Attention: Rick Wilkin



Approved for release:
Lisa Harvey
Project Manager II
7/12/2012 11:43 AM

Lisa Harvey
Project Manager II
lisa.harvey@testamericainc.com
07/12/2012

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TestAmerica Laboratories, Inc.

TestAmerica Savannah 5102 LaRoche Avenue, Savannah, GA 31404
Tel (912) 354-7858 Fax (912) 352-0165 www.testamericainc.com



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Client: US EPA National Risk Mngmnt Research

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With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 04/21/2012; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 4.6 C.

METHYLENE BLUE ACTIVE SUBSTANCES

Sample PGPW02-0412 (680-78798-1) was analyzed for Methylene Blue Active Substances in accordance with EPA Method 425.1. The samples were analyzed on 04/22/2012.

No difficulties were encountered during the MBAS surfactants analysis.

All quality control parameters were within the acceptance limits.

SAMPLE SUMMARY

Client: US EPA National Risk Mngmnt Research

Job Number: 680-78798-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
680-78798-1	PGPW02-0412	Ground Water	04/20/2012 1530	04/21/2012 0958

METHOD SUMMARY

Client: US EPA National Risk Mngmnt Research

Job Number: 680-78798-1

Description	Lab Location	Method	Preparation Method
Matrix: Ground Water			
Methylene Blue Active Substances (MBAS)	TAL SAV	EPA 425.1	

Lab References:

TAL SAV = TestAmerica Savannah

Method References:

EPA = US Environmental Protection Agency

METHOD / ANALYST SUMMARY

Client: US EPA National Risk Mngmnt Research

Job Number: 680-78798-1

Method	Analyst	Analyst ID
EPA 425.1	Brantley, Willie	WB

DATA REPORTING QUALIFIERS

Client: US EPA National Risk Mngmnt Research

Job Number: 680-78798-1

Lab Section	Qualifier	Description
General Chemistry	U	Indicates the analyte was analyzed for but not detected.

Quality Control Results

Client: US EPA National Risk Mngmnt Research

Job Number: 680-78798-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:680-235011					
LCS 680-235011/4	Lab Control Sample	T	Water	425.1	
MB 680-235011/3	Method Blank	T	Water	425.1	
680-78798-1	PGPW02-0412	T	Water	425.1	
680-78798-1MS	Matrix Spike	T	Water	425.1	
680-78798-1MSD	Matrix Spike Duplicate	T	Water	425.1	

Report Basis
T = Total

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: Test America Savannah Job Number: 680-78798-1

SDG No.: _____

Project: Pavillion Groundwater

Client Sample ID	Lab Sample ID
<u>PGPW02-0412</u>	<u>680-78798-1</u>

Comments: _____

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: PGPW02-0412

Lab Sample ID: 680-78798-1

Lab Name: Test America Savannah

Job No.: 680-78798-1

SDG ID: _____

Matrix: Ground Water

Date Sampled: 04/20/2012 15:30

Reporting Basis: WET

Date Received: 04/21/2012 09:58

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Methylene Blue Active Substances	0.20	0.20	0.12	mg/l LAS MW 340	U		1	425.1

3-I N
METHOD BLANK
GENERAL CHEMI STRY

Lab Name: Test Ameri ca Savannah

Job No. : 680-78798-1

SDG No. :

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID:	235011	Date:	04/22/2012 14:57				
425.1	MB 680-235011/3	Methylene Blue Active Substances	0.20	U	mg/l LAS MW 340	0.20	1

5-I N
MATRI X SPI KE SAMPLE RECOVERY
GENERAL CHEMI STRY

Lab Name: Test Ameri ca Savannah Job No. : 680-78798-1

SDG No. : _____

Mat ri x: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 235011 Date: 04/ 22/ 2012 14: 57											
425. 1	680-78798-1	Methyl ene Bl ue Active Subst ances	0. 20	U	mg/ l LAS MW 340						
425. 1	680-78798-1 MS	Methyl ene Bl ue Active Subst ances	0. 521		mg/ l LAS MW 340	0. 500	104	70-130			

Cal cul ations are performed before rounding to avoid round-off errors in cal cul ated results.

FORM V-I N

5-I N
MATRI X SPI KE DUPLI CATE SAMPLE RECOVERY
GENERAL CHEMI STRY

Lab Name: Test Ameri ca Savannah

Job No.: 680-78798-1

SDG No.:

Mat ri x: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spi ke Amount	Pct. Rec.	Li mi t s	RPD	RPD Li mi t	Q
Batch ID: 235011 Date: 04/ 22/ 2012 14: 57											
425.1	680-78798-1 MSD	Meth ylene Bl ue Acti ve Subst ances	0.541		mg/ l LAS MW 340	0.500	108	70-130	4	15	

Cal cul a t i o n s a r e p e r f o r m e d b e f o r e r o u n d i n g t o a v o i d r o u n d - o f f e r r o r s i n c a l c u l a t e d r e s u l t s .

FORM V-I N

7A-I N
LAB CONTROL SAMPLE
GENERAL CHEMI STRY

Lab Name: Test Ameri ca Savannah Job No.: 680-78798-1

SDG No.: _____

Mat r i x: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 235011 Date: 04/22/2012 14:57											
						LCS Source: MBAS SPI KE_00533					
425.1	LCS 680-235011/4	Methyl ene Bl ue Acti ve Subst ances	0.464		mg/l LAS MW 340	0.500	93	70-130			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VII A-I N

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Test America Savannah Job Number: 680-78798-1
SDG Number: _____
Matrix: Water Instrument ID: NOEQUIP
Method: 425.1 MDL Date: 04/28/2010 09:47

Anal yte	Wavelength/ Mass	RL (mg/l LAS	MDL (mg/l LAS MW
Met hylene Blue Active Substances		0.2	0.12

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: Test America Savannah Job Number: 680-78798-1
SDG Number: _____
Matrix: Water Instrument ID: NOEQUIP
Method: 425.1 XMDL Date: 06/02/2009 00:00

Anal yte	Wavele ngth/ Mass	XRL (mg/ l LAS	XMDL (mg/ l LAS MW
Met hyl ene Bl ue Act i ve Subst ances		0. 2	0. 1

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: Test America Savannah Job No.: 680-78798-1

SDG No.: _____

Instrument ID: NOEQUIP Method: 425.1

Start Date: 04/22/2012 14:57 End Date: 04/22/2012 14:57

Lab Sample ID	D / F	Type	Time	Anal ytes																	
				M B A S																	
CCV 680-235011/ 1			14: 57																		
ZZZZZZ			14: 57																		
MB 680-235011/ 3	1	T	14: 57	X																	
LCS 680-235011/ 4	1	T	14: 57	X																	
680-78798-1	1	T	14: 57	X																	
680-78798-1 MS	1	T	14: 57	X																	
680-78798-1 MSD	1	T	14: 57	X																	
CCV 680-235011/ 8			14: 57																		
CCB 680-235011/ 9			14: 57																		

Prep Types

T = Total / NA

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: Test America SavannahJob No.: 680-78798-1

SDG No.: _____

Batch Number: 235011Batch Start Date: 04/22/12 14:57Batch Analyst: Brantley, WillieBatch Method: 425.1Batch End Date: 04/22/12 15:55

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial Amount	Final Amount	MBAS SPI KE 00533			
MB 680-235011/3		425.1		100 mL	100 mL				
LCS 680-235011/4		425.1		100 mL	100 mL	1 mL			
680-78798-A-1	PGPW02-0412	425.1	T	100 mL	100 mL				
680-78798-A-1 MS	PGPW02-0412	425.1	T	100 mL	100 mL	1 mL			
680-78798-A-1 MSD	PGPW02-0412	425.1	T	100 mL	100 mL	1 mL			

Batch Notes

Batch Comment	5540
Chloroform Lot #	2549338
Date Analyzed	04.22.12
Sulfuric Acid Lot Number	26220924
Indicator Reagent ID Number	2621012
NaOH Lot #	2486440
Phenolphthalein Lot #	0166-16
Wash Solution Lot #	2621014

Basis	Basis Description
T	Total / NA

Shi ppi ng and Recei vi ng Documents



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Login Sample Receipt Checklist

Client: US EPA National Risk Mngmnt Research

Job Number: 680-78798-1

Login Number: 78798

List Source: TestAmerica Savannah

List Number: 1

Creator: Barnett, Eddie T

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	